

Claims

1. Method for synchronization in a radio communication system
that is at least partly self-organizing and has a number of
5 mobile stations
which are situated in reciprocal radio range via an air
interface,
wherein at least some mobile stations from the number of
mobile stations transmit synchronization sequences, with
10 reference to which some or all of the mobile stations from
the number of mobile stations synchronize themselves,
characterized in that
for at least one of the mobile stations the range of a
transmitted synchronization sequence is greater than the
15 range of the payload data which it transmits.
2. Method according to Claim 1,
characterized in that
the synchronization sequences are part of a data packet
20 which carries information.
3. Method according to Claim 1,
characterized in that
the synchronization sequences are transmitted on a
25 dedicated synchronization channel.
4. Method according to one of Claims 1 to 3,
characterized in that
synchronizing mobile stations detect the synchronization
30 positions of the other mobile stations and derive their own
synchronization position from these.
5. Method according to Claim 4,

characterized in that
when determining the internal synchronization position a
mobile station takes into consideration the quality of the
individual detected synchronization positions and/or its
preceding synchronization position.

6. Method according to one of Claims 1 to 5,

characterized in that
synchronization data occurs in the same burst which also
carries the payload data.

7. Method according to one of Claims 1 to 5,

characterized in that
the synchronization data is transmitted via a further burst
which is separate from the actual payload data burst.

8. Method according to one of Claims 1 to 7,

characterized in that
the synchronization sequences are transmitted cyclically or
periodically.

9. Method according to one of Claims 1 to 8,

characterized in that
a degree is specified for the quality of the reference in
order to improve the synchronization.

10. Method according to one of Claims 1 to 9,

characterized in that
the synchronization data is transmitted via a further burst
which is separate from the actual payload data burst.

11. Method according to one of Claims 1 to 10,

characterized in that

a synchronization for time slots is used for a synchronization of time frames.

12. Method according to one of Claims 1 to 11,

5 characterized in that
only one mobile station starts the transmit operation
within a time slot.

13. A mobile station for a radio communication system which is
10 at least partly self-organizing,

having means for sending synchronization sequences with
reference to which other mobile stations can synchronize
themselves

characterized in that

15 the means are configured such that the range of a
transmitted synchronization sequence is greater than the
range of the payload data which is transmitted by the
mobile station.

20 14. The mobile station according to Claim 13,

characterized in that

means are provided for receiving synchronization sequences
from some mobile stations out of a number of mobile
stations.

25

15. A radio communication system including a plurality of
mobile stations according to one of Claims 13 or 14.